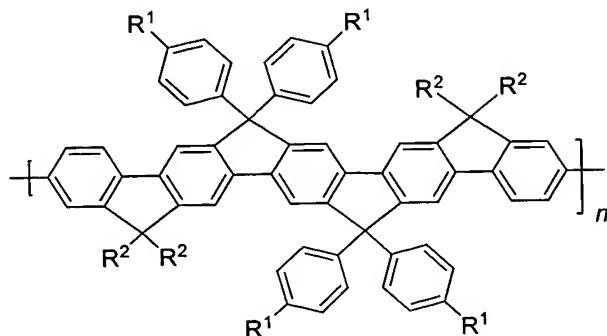


CLAIMS

What is claimed is:

1. A polymer having the structure:

5



wherein:

R<sup>1</sup> is the same or different at each occurrence and is selected from hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> 10 alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkynyl, aryl, heteroalkyl, heteroalkenyl, heteroalkynyl, heteroaryl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups 15 together can form a 5- or 6-membered cycloalkyl, aryl, or heteroaryl ring,

R<sup>2</sup> is the same or different at each occurrence and is selected from C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated 20 oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups together can form a 5- or 6-membered cycloalkyl or heterocycloalkyl ring, and

R<sup>3</sup> is a substituent on a heteroatom which can be the same or 25 different at each occurrence and is selected from hydrogen, alkyl, aryl, heteroalkyl and heteroaryl; and

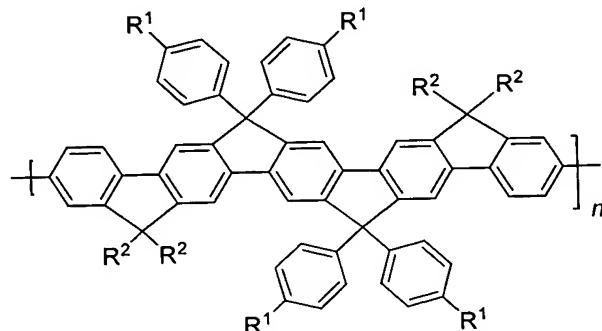
n is greater than 2.

- 2. A polymer according to Claim 1, wherein n is greater than 10.
- 3. A polymer according to Claim 1, wherein R<sup>1</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl.
- 30 4. A polymer according to Claim 1, wherein R<sup>2</sup> is a C<sub>1</sub>-C<sub>20</sub> alkyl.

5. A polymer according to Claim 1, wherein the polymer has an emission maximum less than 500 nm.

6. An electronic device comprising an active layer positioned between two electrical contact layers, wherein the active layer comprises a

5 polymer having the structure:



wherein:

10       $R^1$  is the same or different at each occurrence and is selected from hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkynyl, aryl, heteroalkyl, heteroalkenyl, heteroalkynyl, heteroaryl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups

15      together can form a 5- or 6-membered cycloalkyl, aryl, or heteroaryl ring,

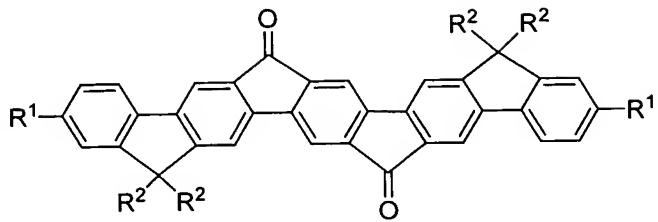
20       $R^2$  is the same or different at each occurrence and is selected from C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkenyl, heteroalkyl, heteroalkenyl, heteroalkynyl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups together can form a 5- or 6-membered cycloalkyl or heterocycloalkyl ring, and

25       $R^3$  is a substituent on a heteroatom which can be the same or different at each occurrence and is selected from hydrogen, alkyl, aryl, heteroalkyl and heteroaryl; and

    n is greater than 2.

30      7. An electronic device according to Claim 5, wherein the device emits light at a wavelength less than 500 nm.

8. A compound having the structure:



R<sup>1</sup> is the same or different at each occurrence and is selected

- 5 from hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkynyl, aryl, heteroalkyl, heteroalkenyl, heteroalkynyl, heteroaryl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups together can form a 5- or 6-membered cycloalkyl, aryl, or heteroaryl ring,
- 10

R<sup>2</sup> is the same or different at each occurrence and is selected

- from C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>2</sub>-C<sub>20</sub> alkenyl, C<sub>2</sub>-C<sub>20</sub> alkynyl, C<sub>1</sub>-C<sub>20</sub> alkoxy, C<sub>1</sub>-C<sub>20</sub> oxyalkyl, C<sub>2</sub>-C<sub>20</sub> oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> oxyalkynyl, C<sub>1</sub>-C<sub>20</sub> fluorinated alkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated alkenyl, C<sub>1</sub>-C<sub>20</sub> fluorinated oxyalkyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkenyl, C<sub>2</sub>-C<sub>20</sub> fluorinated oxyalkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, -CN, -OR<sup>3</sup>, -CO<sub>2</sub>R<sup>3</sup>, -SR<sup>3</sup>, -N(R<sup>3</sup>)<sub>2</sub>, -P(R<sup>3</sup>)<sub>2</sub>, -SOR<sup>3</sup>, -SO<sub>2</sub>R<sup>3</sup>, and -NO<sub>2</sub>; or adjacent R groups together can form a 5- or 6-membered cycloalkyl or heterocycloalkyl ring, and
- 15
- 20 R<sup>3</sup> is a substituent on a heteroatom which can be the same or different at each occurrence and is selected from hydrogen, alkyl, aryl, heteroalkyl and heteroaryl.